

FIG. 1A

hlama5	domain VI MARLKGAGSALCVRGPRGPAPELLVGLIALLGAAREEAGGFSIHPYPFNLAGARTAAATCGEAPANGSPRTE 76
hlama5	DIYCKLVGGPVAGDGNMOTIRGOYCDICTAANGKXAHPSNAIDGTERWQSPPLSLRGLEYNEENVTLADIQGVHAYVLIKFANSPRDLWILERSMDPRTYQWPQFASSSRDCLERFGPOTLERITDDAAICTTEVSRIYPLNGEIVVSLVNGR 238
mlama5	DIYCKLVGGPVAGDGNMOTIRGOYCDICTAANGKXAHPSNAIDGTERWQSPPLSLRGLEYNEENVTLDLGQVHAYVLIKFANSPRDLWILERSMDPRTYQWPQFASSSRDCLERFGPOTLERITDDAAICTTEVSRIYPLNGEIVVSLVNGR
hlama5	domain V PCANPFSYSLRLRFTYKATNVRLRFLRNTLLGHLMGKALRDPVTRRYYSIKDISIGRKVCVCHGHADAQDAKDPDPRLOCTQCHNTGCTCDRCCKGPNQDWPKEATANSANECOSNCKYGHATDCYDPEVDRRASOSLDGTYQGQGVCLDCQH 398
mlama5	PCANPFSYSLRLRFTYKATNVRLRFLRNTLLGHLMGKALRDPVTRRYYSIKDISIGRKVCVCHGHADAQDAKDPDPRLOCTQCHNTGCTCDRCCKGPNQDWPKEATANSANECOSNCKYGHATDCYDPEVDRRASOSLDGTYQGQGVCLDCQH
sanger	HTAGVNCERCIPGTYRSPNHPLDSPHVCRNCNCESDFTDGTCEDLTGRCYCRPNFSGERCIDVCAEGTTPGSCYPTPS--SSNDTREQVLPAQOIVNCDSCSAGTQGNACRKDPVRCRCLCKENFQGTICELCAPGFGYGCQPCQCSSPGVADURCDPDT 557
hlama5	HTTGINCERCIPGTYRSPNHPLDSPHVCRNCNCESDFTDGTCEDLTGRCYCRPNFSGERCIDVCAEGTTPGSCYPTPS--SSNDTREQVLPAQOIVNCDSCSAGTQGNACRKDPVRCRCLCKENFQGTICELCAPGFGYGCQPCQCSSPGVADURCDPDT 557
mlama5	HTTGINCERCIPGTYRSPNHPLDSPHVCRNCNCESDFTDGTCEDLTGRCYCRPNFSGERCIDVCAEGTTPGSCYPTPS--SSNDTREQVLPAQOIVNCDSCSAGTQGNACRKDPVRCRCLCKENFQGTICELCAPGFGYGCQPCQCSSPGVADURCDPDT 557
hlama5	GQCRKRVGEGATCDRCAPGYHFHPLCOLGCSFAGTLPBGCDEAGRLCQPEFAGPHCDRCRPGYHGPNCQACTCDPRGALDOLCGAGGLCRCPGVTGTAQCECPGPHGFPSCVFPCHCSABGSLHAACDPRSGQSCRCRPRVTGLRCDTCVPGAYNF 717
mlama5	GQCRKRVGEGATCDRCAPGYHFHPLCOLGCSFAGTLPBGCDEAGRLCQPEFAGPHCDRCRPGYHGPNCQACTCDPRGALDOLCGAGGLCRCPGVTGTAQCECPGPHGFPSCVFPCHCSABGSLHAACDPRSGQSCRCRPRVTGLRCDTCVPGAYNF 717
hlama5	domain IVb PYCBAGSCHPAGLAPVDPALPEAQVPCWRAHVEGPSCDRCKGFGWGLSPSNPRGCTRCSDLRGLGVAVCQPGTGCCKCHVCGQAQACSCDGFGLDQADYFCRCRCRCDIGGALGQSCBPRTVGVCRCRPNTOGGTCESEPARHLYPLDHLHRLR 877
mlama5	PYCBAGSCHPAGLAPVDPALPEAQVPCWRAHVEGPSCDRCKGFGWGLSPSNPRGCTRCSDLRGLGVAVCQPGTGCCKCHVCGQAQACSCDGFGLDQADYFCRCRCRCDIGGALGQSCBPRTVGVCRCRPNTOGGTCESEPARHLYPLDHLHRLR 877
hlama5	LEEAAIPBCHAVRFGFNPLRFENFSGVAGMALPYQPRIVASRLNLTSPDLFWLPRYVNRGAMSVGRVSVREGRSAACNCTAQSQVAFPTSTEPAPFTVPPQGRGEPFVLPNGPTWALRVEAEGVLLDYVWLLPSAYTEAALQLRVTEACTYRPSA 1037
mlama5	LEEAAIPBCHAVRFGFNPLRFENFSGVAGMALPYQPRIVASRLNLTSPDLFWLPRYVNRGAMSVGRVSVREGRSAACNCTAQSQVAFPTSTEPAPFTVPPQGRGEPFVLPNGPTWALRVEAEGVLLDYVWLLPSAYTEAALQLRVTEACTYRPSA 1037
hlama5	QOQNDCLLYTHLPDLPSPSAGLEALCRODNLPRPCPTTEOLSPSHPLLTCTGSDVDVQVQVAVPQGRYALWVEYANEDARQEVGVAVHPQKAPQOGLLSLHPCLYSLTCRGTAQDTQDHLAVPHLDSEASVRLTAEOARFELHGVTLVPIESFSP 1197
mlama5	LHSTENCLVYAHLPDLPSPSAGLEALCRODNLPRPCPTTEOLSPSHPLLTCTGSDVDVQVQVAVPQGRYALWVEYANEDARQEVGVAVHPQKAPQOGLLSLHPCLYSLTCRGTAQDTQDHLAVPHLDSEASVRLTAEOARFELHGVTLVPIESFSP 1197
hlama5	BEVERVSCISSHGARGNSACLPSRPPKPPQPIILLRDCQVILPPLGLPITHAQLDTPATSPAGPRPPTAVDPAEPTLLRREPQATVFTTHVPTLGRYAFLLHGYPQAHPTFPVEVLINAGRWOGHANASFCBHGKCRNLLVYCEGALLDVTHS 1357
mlama5	BEVERVSCISSHGARGNSACLPSRPPKPPQPIILLRDCQVILPPLGLPITHAQLDTPATSPAGPRPPTAVDPAEPTLLRREPQATVFTTHVPTLGRYAFLLHGYPQAHPTFPVEVLINAGRWOGHANASFCBHGKCRNLLVYCEGALLDVTHS 1357
hlama5	ELTVTVRVPGRWLMIDVILVVPENVYSFGYLREPLDKSYDFISHCAAGVHISPSSSSLFCRNAASLSIFVYNGARPCGCGHEVGATGPTCEBPGQCPCHAHVIGRCRCRCATGYWGFNCRPCDCGAKLDELTCGCTCQPPRTIPDCLLCQDPTF 1517
mlama5	ELTVTVRVPGRWLMIDVILVVPENVYSFGYLREPLDKSYDFISHCAAGVHISPSSSSLFCRNAASLSIFVYNGARPCGCGHEVGATGPTCEBPGQCPCHAHVIGRCRCRCATGYWGFNCRPCDCGAKLDELTCGCTCQPPRTIPDCLLCQDPTF 1517
hlama5	GCHPLVGCBCNCSGGLQELDPTCDTDSGQCRPNVTGRRCDTCSIPGHVYPRCPDCHERAGTAPGVCDPLGQCYCKENVQKCDQCSLGTFSLDAANPKGCTCTCQCHNTERCSSSYTRQEPFDMBEGWVLTSDRQVVPBHQPGTEMLRAD 1677
mlama5	GCHPLVGCBCNCSGGLQELDPTCDTDSGQCRPNVTGRRCDTCSIPGHVYPRCPDCHERAGTAPGVCDPLGQCYCKENVQKCDQCSLGTFSLDAANPKGCTCTCQCHNTERCSSSYTRQEPFDMBEGWVLTSDRQVVPBHQPGTEMLRAD 1677
hlama5	IRHVPVAVPAPPELYWQAPPSTYLDGRVSSYGTLRYELHSETQKGVIVFVPMESRPNVVLQGNMSITFLPAPYFTRGSHRQLOLVQGNFHTTNTVSGREELMNVLASLEOLOIRALFSQISSASVLSRVALEVASPAGGALASNVLCCLCPASPY 1837
mlama5	IRHVPVAVPAPPELYWQAPPSTYLDGRVSSYGTLRYELHSETQKGVIVFVPMESRPNVVLQGNMSITFLPAPYFTRGSHRQLOLVQGNFHTTNTVSGREELMNVLASLEOLOIRALFSQISSASVLSRVALEVASPAGGALASNVLCCLCPASPY 1837



FIG. 1B

h1ama5	HTTGRCEI	CAPPGYGNALIPGNCTCDCTCPGTEACDPHSGHCLCKAGVTRORRCDRCQCEGHFGFCGCGCRPCACGPAABGSECHPSQGCICRPGTMGPQCRECAPGYWGLPBGQRCCQCPGGRCDPHTRCNCPPGLSGERC	CDTCSQHQVVPVPGG	2156			
m1ama5	HTTGPCHERC	CAPPGYGNALIPGNCTCDCTCPGTEATCDPQSGRCLCKAGVTGQRCDRECLGTFGFBGCRPCACGPAABGSECHPSQGCICRPGTMGPQCPRECAPGYWGLPBGQRCCQCPGGRCDPHTRCNCPPGLSGERC	CDTCSQHQVVPVPGK				
h1ama5	PVGHSHCEV	CDHCVVLLDDLERAGALLPAIHQELRGINASSMAMARHLRNASIA	ADLQSQLSRPIGPRHETHAQLEVLBQQSTSLGQDARRIGQAVGTREDQASQLLAGTEATLGHAKTLLAAIRAVDRTLSELMASQTHGLGIANASAFSGQLRRTL	2316			
m1ama5	PGSHGTHCEV	CDHCVVLLDDLERAGALLPAIREQLQGINASSAAMARHLRNASIA	ADLQSKLRPPGPYQAAQQLTTLQSQSISLQQDTERLASQATGVQCAQQLDQTTTESTLGRAQKLESVRAVAGRALNELASRMGQSGPGDALVPSGQLRMAL				
h1ama5	AEVERLLM	PMRARDLCA	QPAABEALAAQRIARVQEQLSINWENQALATOTREDLQAEAGLMDLREALNDAVDA	TREAOBELNSRQRIEALQKQELSRDNATLQATLHAARDTLASVPRLLHSLDQAKKEELERLAA	SLDGARTPLLORMOTFS	2476	
m1ama5	AEVERLLM	DMRTRD	LGAQAVAEALAEARLMAVQEQUTSFMEENQSLATHINDQLAQYESGLMDLREALNQAVNTT	REABELNSRQRIEALQKQELSRDNATLQATLHAARDTLASVPRLLHSLDQAKKEELERLAA	SLDGAWTPLLKRMQAFS		
h1ama5	PAGSKLR	LIVEAAEAHAQQLQOLALNLSII	TLVNDRLTORALEASNAVSRILOQAARDAQALQADQHTWATVVRQGLVDRAQALLANSTALEESMLQEQRIQAGLIVYMAALQARTQDRVRAKDCOLEAHTQAAQAQMLANDT	DETSKKIAHAKAVA	2636		
m1ama5	PASSKYD	LIVEAAEAHAQKLNQALNLSGII	LAGINQDRFIQRAVEASNAVSSILQAVQAHEDAQAALRQASRTWENWQRGIAAGRQALLANSALERTILGHQGLAQGKELQAAAGIQLNHNWARKNQAAQIQEAQRMLANDT	SETSEKIAHAKAVA			
h1ama5	AEADQTA	TRVQSOLOQAMQENVEEKQGV	EGLEGODLGOAVLDAGHVSYSTLEKTLIPOLLAKSILENRYHNASTALSASIGVEURELLIAQARGAASKVIVPMKENGESGVOLRTPRDLADI	AAAYTALFKFYLOG--	PEPEPGQGTEDRFRVMYMGSRQATGDY	2794	
m1ama5	REALS	TATHVQSOLQGMQENVEERWQSOLGGI	QQQDLQSVREDASSYSTLEKTLIPOLLAKSILENRYHNASTALSASIGVEURELLIAQARGAASKVIVPMKENGESGVOLRTPRDLADI	AAAYTALFKFYLOG--	PEPEPGQGTEDRFRVMYMGSRQATGDY		
h1ama5	KQVSLRD	KXHWYVOLGEAGAVLS	IDEDIGQFPAANSIDRTILOPHMNSVTVRQMIOETKQDTPAFGAEGLMLAPDDDFVYVGGYSPTPTPPLLRFPQYRGCIENDVLNEEVSLYNFERTQD	LTAYDRPCARSKSTGDPMLTDSYSLDGTGPARI	2954		
m1ama5	MVSLANQ	KXHWIRLKGAGFTT	LSIDENTGQFPAVSI	DRTLQPHMNSVTVKQMVHEIKGDTVAPGSEGLMLHPDDFVYVGGYPSNFTPPEPLRFPGLGGLCIEMETLNEEVSLYNFERTQD	LTAYDRPCARSKATGD	PMLTDSYSLDGSGFARI	
h1ama5	SFDSQ	ISTTKRFPQELRLVSYSGVLFTL	KQSQSOFCLAVQESGLVLLYDFGAGLKKXAVFLQPPPLITSASKAIQVTLFGSSRKRVILVRVERATVYVSVEQDNDLEADAYXILGVP	PDQLPPSLRWLPFTQGSVRCVKAGIKALGKYVDLKRLLNTTVGSAG	3114		
m1ama5	SFEKQ	SNTKRFPQELRLVSYSGVLFTL	KQSQSOFCLAVQESGLVLLYDFGAGLKKXAVFLQPPPLITSASKAIQVTLFGSSRKRVILVRVERATVYVSVDQDNDLEADAYXILGVP	PDQLPPSLRWLPFTQGSVRCVKAGIKALGKYVDLKRLLNTTVGSAG			
h1ama5	CTADLL	VGRAMTFHGHFLKIALSNVAPL	TGNVYSGRGPHSQAQDSALLAYRASPDGLCQVSIQQGRVSIQILARTEVKTOAGFADGAPHYVAPYSNATQVWLIVYDDQLQOMKPHRGPPPELQ	QPBGPBRLLLGLLPESGTYINFSGCISNNVFQRLIGPQ	3274		
m1ama5	CTADLL	VGRAMTFHGHFLKIALSNVAPL	TGNVYSGRGPHSQAQDSALLAYRASPDGLCQVSIQQGRVSIQILARTEVKTOAGFADGAPHYVAPYSNATQVWLIVYDDQLQOMKPHRGPPPELQ	QPBGPBRLLLGLLPESGTYINFSGCISNNVFQRLIGPQ			
h1ama5	RVFDL	QNLGMSVNVSTGCCAPALQAQ	TPGLGFRGLQATARKASRRSROPARHPACMLPPLHRTTRDSYQFGSSISHLPEVGLILARHNWPSLSLHVLP	SRGLLFTARLP	PGSPSLALFTLSNGHFVAQMEGLGTRLEAQRQRSPORWHKVSVRME	3433	
m1ama5	RVFDL	QNLGMSVNVSTGCCAPALQAQ	TPGLGFRGLQATARKASRRSROPARHPACMLPPLHRTTRDSYQFGSSISHLPEVGLILARHNWPSLSLHVLP	SRGLLFTARLP	PGSPSLALFTLSNGHFVAQMEGLGTRLEAQRQRSPORWHKVSVRME		
h1ama5	KNRILL	VTGKARAWSOBQPHROHQARHP	OPHTLFFVGZLPASSHSKLPVITVTPSGCVKRLRHGRLGAPTRWAGVTPC	ILGPLEAGLFP	PPGSGGVITTLDLPGATLLPDVGLKLEVRPLAVTGLIFHLGOARTPYLOLQVTEKCVLLRADDGAGEFSTS	3593	
m1ama5	MQQLQ	LVTVDGSQLWSQKALHHRVPRAER	POPVTLSVGZLPASSYSKLPVSVGFSQGLKKLQDKQPLATPTQMVGVTP	CYSGPLEDSGLT	PPSGEGVTTLELPAKMPYVSTLELWRELAAGLIFHLGOALATPYNQLVLTQVLLQANDGAGEFTSW		
h1ama5	VTRPSV	LCQGHRLAVMKSQNVLRLEVDQAQSNHVTGPI	LAAACAPLXLGGIPEPMVQPKPAYCGQWRLEAVNESPVAMTSES	VEVHGAVGAGCPAA		3695	
m1ama5	VTVPEK	-LDSGRHRAVIMGRD	TLLEVDTQSNHTTGRLPESLAGSPALMLHLSPLASSTAREPLFAYRSGCURLLINGAPVNVITAS	VOIQAVGWRCTSGTSLALS	KQKQKALTQEHAKTSVSPLLWH		

FIG. 2A

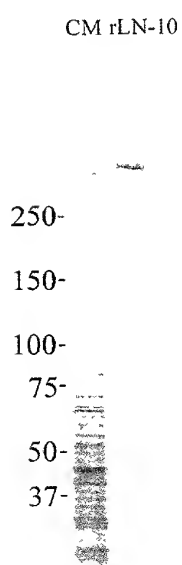


FIG. 2B

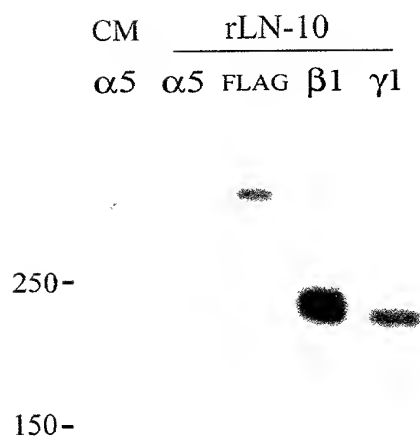


FIG. 2C

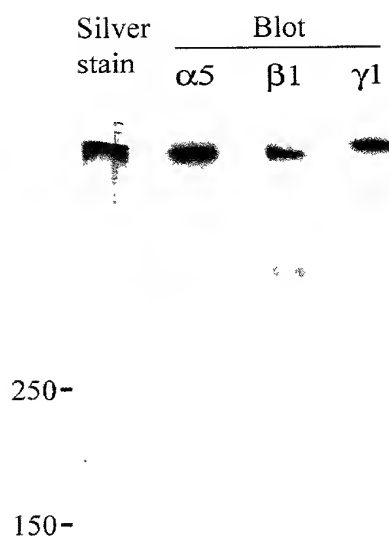


FIG. 3A

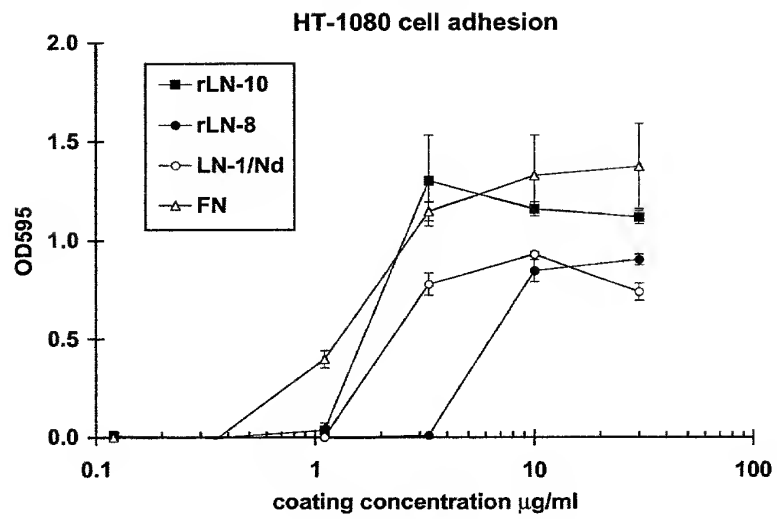


FIG. 3B

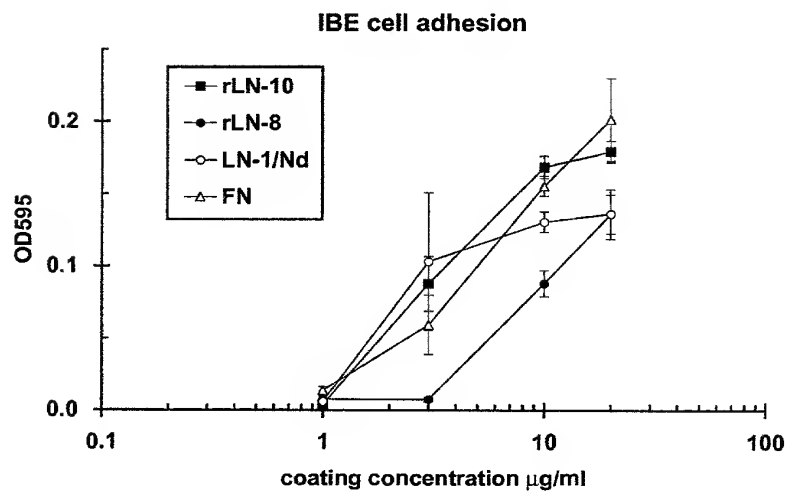


FIG. 3C

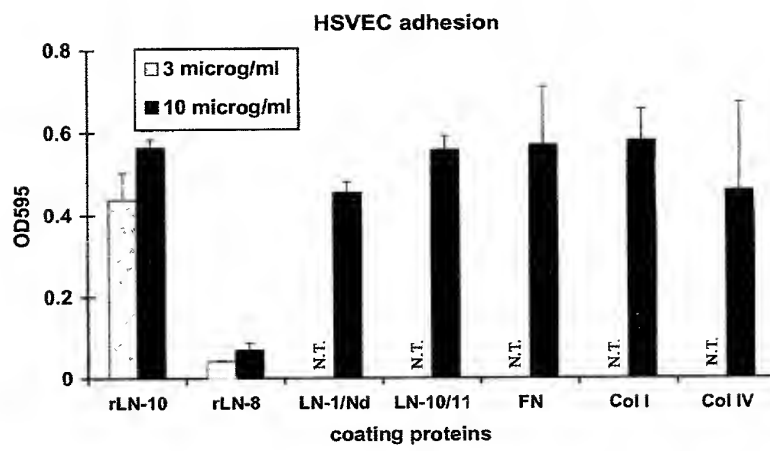


FIG. 4

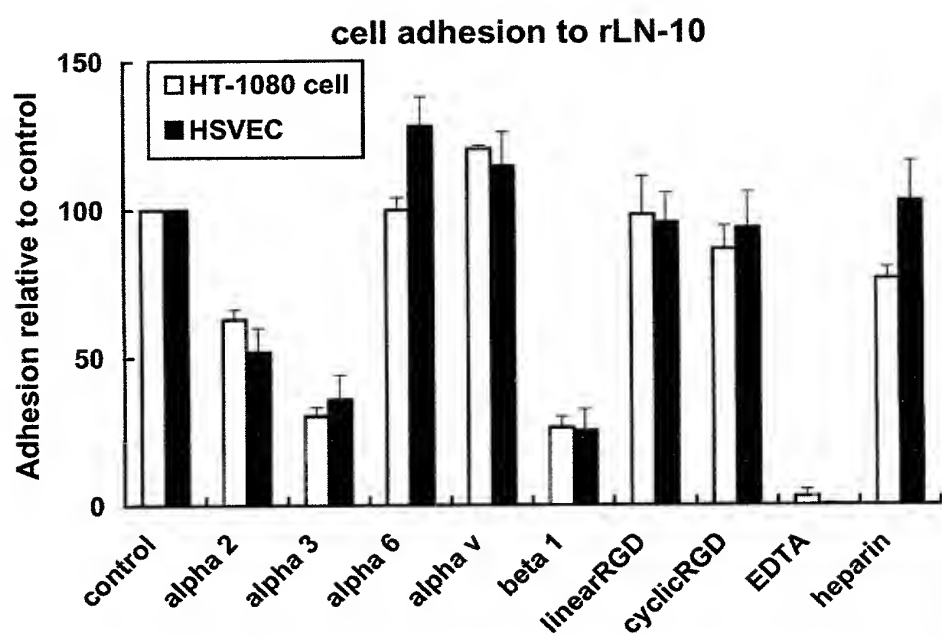


FIG. 5

